

CLAIMS

1. A method of wireless communication comprising:

transmitting at least one data burst using an assigned one of at least
5 two radio configurations, the radio configuration assigned in response
to a higher data transmission rate determined by calculating the data
transmission rate for the at least one data burst based on a power level
and Walsh code for each of the at least two radio configurations.

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2. The method of Claim 1, wherein the step of calculating the data
transmission rate comprises:

evaluating the power level for each radio configuration; and

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evaluating the availability of Walsh codes for each radio configuration.

3. The method of Claim 2, wherein the step of evaluating the power level
20 for each radio configuration comprises:

evaluating the power level without the at least one data burst; and

evaluating the power level for the at least one data burst.

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4. The method of Claim 3, wherein the evaluated power level for the at least one data burst comprises:

evaluating the power level at an onset of the at least one data burst.

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5. The method of Claim 4, comprising

if the calculated data transmission rate is about equal for each radio configuration, comparing a channel power with a threshold.

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6. The method of Claim 5, comprising:

if the channel power is at or below the threshold, assigning the one of the radio configurations with a higher of maximum number of traffic Walsh codes of at least two radio configurations; and

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if the channel power is above the threshold, computing a power utilization and Walsh code utilization for each radio configuration.

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7. The method of Claim 6, wherein the step of computing a power utilization for each radio configuration comprises:

for each radio configuration, dividing the power in use during the at least one data burst by a maximum traffic transmission power.

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8. The method of Claim 6, wherein the step of computing a Walsh code utilization for each radio configuration comprises:

5 for each radio configuration, dividing the Walsh codes in use during the at least one data burst by a maximum number of traffic Walsh codes.

9. The method of Claim 8, wherein the step of dividing the Walsh codes in use comprises:

10 considering Walsh code blocking between codes of different length in response to available Walsh code orthogonality rules.

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10. The method of Claim 6, comprising:

20 assigning the radio configuration supporting having a ratio of power utilization to Walsh utilization closest to at least one of unity and a tunable value about unity.

11. The method of Claim 6, wherein the at least two radio configurations comprises at least one of RC3 and RC4.

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12. A method of wireless communication comprising:

receiving at least one data burst using an assigned one of at least two
radio configurations, the radio configuration assigned in response to a
5 higher calculated data transmission rate determined by calculating the
data transmission rate for the at least one data burst based on a power
level and Walsh code for each of the at least two radio configurations.

10 13. The method of Claim 12, wherein the step of calculating the data
transmission rate comprises:

evaluating the power level for each radio configuration; and

15 evaluating the availability of Walsh codes for each radio configuration.

14. The method of Claim 13, wherein the step of evaluating the power
level for each radio configuration comprises:

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evaluating the power level without the at least one data burst; and

evaluating the power level for the at least one data burst.

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15. The method of Claim 14, wherein the evaluated power level for the at
least one data burst comprises:

evaluating the power level at an onset of the at least one data burst.

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16. The method of Claim 15, comprising

if the calculated data transmission rate is about equal for each radio configuration, comparing a channel power with a threshold.

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17. The method of Claim 16, comprising:

if the channel power is at or below the threshold, assigning the one of the radio configurations with a higher of maximum number of traffic Walsh codes of at least two radio configurations; and

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if the channel power is above the threshold, computing a power utilization and Walsh code utilization for each radio configuration.

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18. The method of Claim 17, wherein the step of computing a power utilization for each radio configuration comprises:

for each radio configuration, dividing the power in use during the at least one data burst by a maximum traffic transmission power.

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19. The method of Claim 17, wherein the step of computing a Walsh code utilization for each radio configuration comprises:

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for each radio configuration, dividing the Walsh codes in use during the at least one data burst by a maximum number of traffic Walsh codes.

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20. The method of Claim 19, wherein the step of dividing the Walsh codes in use comprises:

5 considering Walsh code blocking between codes of different length in response to available Walsh code orthogonality rules.

21. The method of Claim 17, comprising:

10 assigning the radio configuration supporting having a ratio of power utilization to Walsh utilization closest to at least one of unity and a tunable value about unity.

15 22. The method of Claim 17, wherein the at least two radio configurations comprises at least one of RC3 and RC4.